

Uveitis: Diagnosis and Therapy Made Simply

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History

- Typically emergency consult or walk in
- Patient has pain
- Redness
- Photophobia
- Difficulty opening the eye
- Blurred vision

Pertinent History

- Quantify Pain
- Qualify Pain
- How long?
- One eye or both
- Any trauma
- Past ocular surgeries
- Has this happened before
 - How often
 - Which eye
 - How treated

Pertinent Medical History

- Systemic conditions associated with uveitis
 - Sarcoid
 - Lupus
 - Syphilis

- Lyme's
- Reiter's
- Bechet's
- JCA
- Herpes
- Arthritis
- Crohn's Disease
- TB
- HIV

Directed History Questions

- Joints Any pain, which joints, how many ?
- Any diagnosis of arthritis ?
- Back pain/ stiffness (esp in am)
- Limited motion of hips
- Ulcerative mouth lesions ?
- Ulcers, painful lesions in genital area ?
- Urinary discharge, pus, blood, pain
- Psoriasis, other skin lesions ?
- Difficulty breathing , chronic cough ?
- Recent febrile illness ?
- Recurrent diarrhea, bloody diarrhea, abdominal cramps ?

Clinical Findings

- VA
- External Exam
- Pupils
- Slit lamp
 - Conjunctival hyperemia
 - Keratic Precipitates
 - Cells and flare
- Tonometry

Evaluating for cells and flare

- Complete darkness
- Highest light brightness

- Small slit beam
- High magnification

Always Dilate !!!

- Need to rule out posterior pole involvement/cause
- Cycloplegia will reduce pain/ciliary spasm

Rule out endophthalmitis

- Severe pain
- Severe AC reaction
- Hypopyon
- Prior h/o ocular surgery (cat, filter)
- Systemic history
- Emergency referral

Treatment

- If cornea intact
- Pred Forte (prednisolone acetate)
- Dose aggressively
 - Q1h for severe
 - Q2h for moderate
 - Q4h for mild
- Must shake bottle

Treatment

- Cycloplegia/Mydriatic
 - Reduces pain/ciliary spasm
 - Break/prevent posterior synechae
 - Homatropine 5% bid – qid for mild to moderate pain
 - Homatropine and scopolamine no longer available
 - Cyclopentolate 1 or 2% qid for mild to moderate pain
 - Atropine 1% bid-tid for severe pain

Is there a role for weaker steroids?

- Inflammase Forte (prednisolone phosphate solution 1%)
- FML Forte (fluometholone acetate suspension .25%)
- FML (fluorometholone acetate suspension .1%)
- Pred Mild (prednisolone acetate suspension .12%)
- Non-steroid anti-inflammatories (NSAIDS)
- Vexol (rimexolone suspension 1%)
- Lotemax (loteprednol etabonate suspension .5%)

Efficacy and safety of 1% rimexolone versus 1% prednisolone acetate in the treatment of anterior uveitis--a randomized triple masked study.

Abstract

PURPOSE:

To evaluate the efficacy and safety of 1% rimexolone versus 1% prednisolone acetate ophthalmic suspension in the treatment of anterior uveitis.

METHODS:

A randomised triple masked, parallel comparison of rimexolone and prednisolone acetate ophthalmic suspensions was carried out on 78 patients with acute, chronic and recurrent anterior uveitis. Treatment regimen included instillation of one or two drops of drug one hourly through the waking hours during the first week, two hourly in the second week, four times a day in the third week, two times a day for the first 4 days and once a day for the 3 days in the last week. The patient was clinically evaluated on the 3-4th, 7-10th, 14th, 21st and 28th days. The patient was also reviewed on the 30th day. Anterior chamber cells and flare reactions were compared for evaluating the efficacy of the drugs.

RESULT:

Rimexolone is as effective as prednisolone acetate ophthalmic suspension in the treatment of anterior uveitis. The largest difference found was 0.1 in the flare reaction (statistically insignificant; $p = 0.3$) and 0.2 score units (statistically significant; $p = 0.01$) in the cells. Overall, comparison of the drugs shows no clinical significance in the treatment of anterior uveitis by either drug. Difference in intraocular pressure (IOP) was also statistically insignificant ($p > 0.05$). However, three patients in the prednisolone acetate group and 1 patient from the rimexolone group showed a rise in IOP.

CONCLUSION:

Rimexolone 1% ophthalmic suspension is as effective as and safer than prednisolone acetate 1% ophthalmic suspension in the treatment of anterior uveitis.

Controlled evaluation of loteprednol etabonate and prednisolone acetate in the treatment of acute anterior uveitis. Loteprednol Etabonate US Uveitis Study Group.

Abstract

PURPOSE:

To compare the safety and efficacy of loteprednol etabonate 0.5% ophthalmic suspension with prednisolone acetate 1.0% ophthalmic suspension in reducing the ocular signs and symptoms associated with acute anterior uveitis.

METHODS:

Two prospective studies were conducted in sequence. Both were parallel, randomized, double-masked, active-controlled comparisons conducted at academic or private practice clinics in the United States. Efficacy was evaluated by the proportion of patients with a score of 0 for key signs and symptoms of uveitis. Intraocular pressure was increased regularly. The first study involved up to 42 days of treatment, starting with a dose of eight times per day. The second study involved up to 28 days of treatment, starting with a dose of 16 times per day.

RESULTS:

In the first study (N = 70), the proportion of patients achieving resolution by the final visit was anterior chamber cell (74% loteprednol etabonate, 88% prednisolone acetate, P = .194) and flare (71% loteprednol etabonate, 81% prednisolone acetate, P = .330). In the second study (N = 175), the proportion of patients achieving resolution by the final visit was anterior chamber cell (72% loteprednol etabonate, 87% prednisolone acetate, P = .015) and flare (66% loteprednol etabonate, 82% prednisolone acetate, P = .017). In both studies, intraocular pressure increase of more than 10 mm Hg was observed more frequently in patients receiving prednisolone acetate (seven patients) than those receiving loteprednol etabonate (one patient).

CONCLUSIONS:

Although a clinically meaningful reduction of signs and symptoms was noted in both treatment groups, loteprednol etabonate was less effective than prednisolone acetate in both of these controlled studies. However, the more favorable profile of loteprednol etabonate with respect to intraocular pressure increase may make it useful in many patients.

Common Mistakes

- Steroid too weak
- Dosage too infrequent
- Taper too quickly
- Finishing too soon

Durezol (Difluprednate emulsion .05%)

Twice the potency of Pred Forte

Much greater incidence of steroid IOP response (high IOP spikes)

More expensive (unit dosage)

Trade name quality

Complications of Topical Steroids

Increase in IOP (steroid responder)

inflammation control more important than IOP rise?

- steroid course relatively short duration
- if very high, add aqueous suppressant
(b-blocker, alpha agonist, topical CAI)

PSC Cataract

Secondary infection - bacterial/fungal

Reactivation of herpes simplex virus

Corneal melting

Systemic absorption especially children

Tertiary Treatments

- Kenalog (triamcinolone) Periocular and intravitreal steroid injection
- Ozurdex (dexamethaxone intravitreal implant)
- Oral steroids
- Auto-immune suppressive agents
 - Methotrexate / chlorambucil

Systemic Workup

- Recurrent uveitis
- Bilateral uveitis
- Refractory uveitis

Lab Testing

- CBC/ESR
- ANA
- ACE
- RF
- RPR/VDRL
- HLA B27
- Lyme titer
- CXR
- PPD

Complications of uveitis

- Corneal decompensation
- Peripheral anterior synechia
- Angle scarring
- Elevated IOP/Glaucoma
- Posterior synechia
- Cataract

Differential Diagnosis

- Conjunctivitis
- Episcleritis/Scleritis
- Angle closure glaucoma
- Staph hypersensitivity
- Keratitis

CASE